

## Beyond the Acrobatics: A Deep Dive into Bat City

In the cozy, cluttered living room of her home, Dianne holds in her clenched fist a tiny fuzzy creature, about the size of a finger puppet. Its even tinier head pokes through the space between her index finger and thumb.

“I’d guess that she’s about a month old. She’s a little thin, but otherwise is in very good shape! She’ll be doing much better in no time!”

Standing beside her are Daniel and Alex, two college students who found the small creature in the parking garage of their West campus apartment.

“When I saw it there, I thought it was a giant cockroach! But as I got closer, I could see it had all of this fur.” Alex says.

Unsure what to do, the pair had contacted the Austin Wildlife Rescue, who referred them to Dianne. Running the only bat rescue operation in the city and throughout several neighboring counties, she is accustomed to such calls. With her careful instruction, Daniel and Alex safely captured and transported the tiny creature inside an empty cup they’d found in the backseat of their car.

Presently, the two hover around Dianne, watching in awe as she feeds the dark brown pup a fat, yellow mealworm. It chews slowly, its tiny mouth opening wide to bare a set of white, razor thin teeth.

The month of June marks the beginning of baby season for bats all across central Texas, and my roommate Tín says it’s likely we’ll see many during our visit. Tín is directing me to the Austin Bat Refuge, a place they have been volunteering for many months and which I have visualized through limited recollections as a cross between a shelter and a clinic. What I find tucked away in a charming house in East Austin is better described as its own kind of ecosystem. Here, Dianne and her husband Lee share their home with the bats that arrive on their doorstep from all over central Texas. Completing the biotic network are lots of plants, lots of bugs, and more humans, like Tín, who are passionate about wildlife.

“I’m glad you’re coming here with me,” says Tín, “because it’s a difficult place to describe.”

\*\*\*

As an Austin native, I grew up carrying my city’s status as home of the world’s largest urban bat colony with a degree of oblivious pride. After dusk on any given night between March and October, one can witness the evening flight of up to 1.5 million of these Mexican free-tailed bats. On a few special occasions, I recall waiting alongside thousands of spectators crowded along the Congress bridge in anticipation of their spectacle. Since the 1980s, residents and tourists alike have gathered this way, watching as their stream of silhouettes cascade above into the darkening sky. Yet despite the bat iconography scattered about my hometown, the story of the animals themselves remained a mystery I hadn’t bothered to explore. Once, on a riverboat tour of the colony in my early adolescence, my Dad had mischievously raised his hand to ask:

“Why are bats so evil?”

I was too embarrassed to pay the guide much attention.

\*\*\*

Knocking on the side door, Tín and I are waved in by Dianne, who sits at the living room table clutching her rescued pups. We enter through the small kitchen, where superimposed upon an ordinary miscellany of appliances, books, and trinkets is every imaginable tribute to the bat species. There are bat mugs, bat window curtains, bat posters, and even an engraved bat-themed light switch plate. On the refrigerator, fastened with bat magnets, are kids’ drawings of bats in brightly colored crayon. Dianne looks up at us, flashing a welcoming smile. She is an older woman, but this fact is obscured by her beauty and her youthful demeanor. Her warm eyes are framed by a pair of glasses that ever so slightly magnify them. Through these lenses, she peers attentively at the creature twitching inside her clasped hand. Dianne explains that, unlike the Mexican free-tails under the bridge, this pup is an evening bat, distinguished by her deep brown coat and a mouse-like pair of black ears. Thanking Alex and Daniel for their compassion, she asks them to sign some paperwork to confirm that they haven’t been bitten. They are lingering and asking all sorts of questions, still mesmerized by the tiny creature they have saved and the world they have stumbled into, by chance.

“Tín, why don’t you show them the flying cage?”

In the backyard, I am astonished to find a tall, spacious courtyard in place of a cage. It is enclosed by transparent walls of gridded wire, and dense green foliage blocks the onslaught of the Texas sun. Here, the bats brought to the refuge are rehabilitated, stretching out their wings in preparation for their release back into the wild. Entering through its gates, I am immediately cooled by misters that spray overhead, dripping moisture onto a tarp draped across the center of the ground. Tín tells me that this tarp channels this drizzle into a reservoir called the “swoop zone”, where the cage’s trainees will practice skimming its surface for drinking water. A yellow butterfly flutters past to perch on a green, leafy plant below my knee. The plant is one of many in the cage’s thriving garden, which Tín mentions was designed by Lee to attract moths and other crop pests upon which the caged bats feast as they practice their hunting skills. Though June is the busiest time of year for Dianne and Lee, in the light of day the courtyard is quiet. The only thing that stirs is a steady swarm of mosquitos that covers my body in itchy welts, indifferent to my three coats of bug spray. Sensing my confusion, Tín explains that bats are expert hiders that tuck away in secluded spaces and blend into their surroundings. I roam around the flying cage, searching for these mysterious creatures who seem to disappear even in plain sight.

\*\*\*

Under Congress Avenue Bridge, the same baby frenzy landing nursing mothers and pups of all shapes and sizes on Dianne and Lee’s doorstep is taking hold. The colony of Mexican free-tails that roosts here each summer is made up entirely of females, who each give birth to a single baby pup at the beginning of June (Bat Conservation 2018). To gather the nutrients needed to nurse their young, these mothers will disembark from the bridge on nightly trips covering up

to 100 total miles of distance, sometimes consuming more than their own weight in insects (Texas Parks 2018). In late July, their pups will begin learning to fly, and in mid-August this will culminate in the spectacle of up to one and a half million bats pouring into the evening sky (Austin Bat Refuge 2018). During these peak flights, the free-tails will soar to heights of up to 10,000 feet (around 8 times the height of the Empire State Building) and consume hundreds of tons of pests who would otherwise continue their high altitude migration to devour crops in places as far north as Canada (McCracken 1996). More than a dazzling display, these evening hunts are part of an ecological niche filled by bats all across North America that collectively saves the U.S. Agricultural industry anywhere from 3.7 to 54 billion dollars per year in pest control (University of Tennessee 2011).

\*\*\*

Stumbling around the flying cage, I attempt to help Tín locate a family of Eastern red bats. Unlike our beloved free-tails, Tín informs me, these red-headed loners roost in trees either alone or with their children, until they are old enough to move out. I am a bit disoriented, searching for these peculiar, winged mammals in a color I hadn't even know them to exist. At the edge of the enclosure Tín stops, beckoning me to look up at where they are pointing. Above our heads, an unassuming bundle of fur the color of freshly dead leaves hangs from the gridded ceiling, twitching ever so slightly. Its anatomical elements are indistinguishable. I can't tell a foot from a wing from an ear, or even locate the boundary between the mother and the bodies of her pups. I stand gaping at this fuzzy clump that might fit in the palm of my hand, waiting to see something that makes any sense.

Transfixed by this mystery, I've forgotten Tín is here on mealworm duty. Using a long pair of pliers, they extend a writhing worm toward the formless, dangling object. Suddenly the mass unfurls enough to reveal it possesses at least one head. I see a fluffy yellow face with a pointy nose and tiny ballpoint pen dots for eyes. For the second time I am struck by the observation that bats have impossibly tiny eyes, though Tín dispels this generalization.

"Bats are actually categorized based on eye size. Megabats, like those Australian flying foxes, have big puppy dog eyes they use to look for fruit and brightly colored flowers and stuff. But they all live in tropical areas far away from here. The only bats species found in Texas, or even in the U.S. really, are microbats. They can see pretty well in daylight, actually, but they depend on echolocation at night, when they're active. That's why their ears are so crazy looking. This all developed over millions of years to minimize most competition over resources. They're pretty safe from most predators, sleeping in caves all day, and I can't think of many other things up there at night, fighting over insects in the sky. Bats kind of have that niche all to themselves."

*No wonder there are so many of them, I think.*

I stare into Mama red bat's tiny beady eyes as she snacks contentedly on her mealworm. Little pup heads, still growing out their fluff, peek out from their perches along her chest, hoping to get a taste. Tín exclaims in amused frustration as each worm falls out from their clumsy mouths onto the ground and, in one case, onto my head.

\*\*\*

While our enchantment with the colony under the Congress bridge is rightfully earned, we play a dangerous game in our preoccupation with its novelty and spectacle. While many see Austin's bats as a one-of-a-kind treasure, the truth is that Mexican-free tails are one of the most abundant species of mammals both in Texas and throughout the southern United States (Texas Parks 2018). Austin's colony is nowhere near the largest: its population of 1.5 million is dwarfed by the colony of 10 million who summer in a cave near the Frio river (Texas Parks 2018), and the astonishing colony of 15-20 million freetails who roost only 20 miles outside of San Antonio in Bracken Cave (Bat Conservation 2018). This scale of magnitude reminds us that our city-dwelling bats are but a small part of a much larger and more complicated drama.

Dianne and Lee embody the fullest expression of this story, in both its sprawling immensity and its vibrant details. Huddled over their radar, the two track the aggregate movement of millions of free-tailed bats in colonies all across Texas, thrilled by the sweeping narratives that unfold. In the same breath Dianne may grasp in the palm of her hand the fuzzy grey body of a small orphaned free-tail, grounded by a miscalculated swoop while first learning to fly. The peculiarities of its prominent ridged ears and the wrinkled texture of its lip complete the scene. Though Dianne and Lee know a lot about bats, they can also teach us a lot about integrity.

\*\*\*

Along one wall of the flying cage, mesh structures called pup tents hang in a row, exuding their humanity like a row of illuminated lanterns. For the reclusive bat, this glow of hope is found in darkness, where suitable shelter is a resource invaluable to its chances at a long and prosperous life in the wild. Inside each tent is a habitat furnished with this in mind from a charming assortment of microfiber beanies, plastic foliage, soft blanket scraps, and other household items. Tucked away in these suspended camps, rescues comfortably rehabilitate or just rest easy in between nights spent flexing their wing muscles around the cage.

While re-release is always Dianne and Lee's goal, not all of the rescues are so lucky. In one of these cozy pup tents I meet Junebug, another russet coated Eastern red who thrashes about in wild excitement over her mealworm. Though it is difficult to see while contracted, Tin points out to me that her wing is torn and bent in some places where she was unable to emerge from her rescue unscathed.

"She was found caught in a piece of machinery-- it messed up her wing pretty badly and I think she may have even suffered a bit of head trauma. She's definitely a little wacky."

Junebug is a little bit twitchier than the others, and I notice sometimes that she flails about so much that she'll drop her mealworm, or will get stuck on the floor of her tent, having lost grip of the fake plastic vines that hang from her little ceiling. Trying to peer into her little black eyes I make a clicking sound, hoping to get her attention. She swivels her head toward me without hesitating, craning her neck while widening and releasing her jaw in rhythmic pulses in a way that bares her tiny fangs and seems almost aggressive.

“Is this also something she does?” I ask Tín, making a poor attempt to mimic her.

“She’s probably just communicating, or echolocating!” says Tín. “Bats make noises outside of the frequency we can hear, as humans.”

Hearing the gate creak open behind us, I turn to see Lee for the first time, entering the cage. He has a graceful nostalgia about him, as if he has stepped from his youth into the present decade feeling no less at ease. He wears his grey, wavy hair in a long ponytail that trails behind him as he ascends a nearby ladder in a pair of black converse. A few minutes pass as he carefully examines, with bare hands, what must be another family of bats.

“Earlier I was able to trick this mom over here into nursing an orphan who arrived just this morning, but now she’s giving him the cold shoulder.” says Lee, approaching us. “Kind of a bummer. Although he doesn’t seem too bent out of shape about it.”

He shows me a video on his phone of the miracle he’d orchestrated. On the screen a wriggling family of Eastern reds, a mother and her three pups all marked by blue paint on their outer ear, have made room for a fourth red pup, distinguished by his own red ear. Unlike most other species, who bear a single baby per year, Eastern reds carry up to four pups per pregnancy. To accommodate these hungry children, Mothers have four nipples that can be nursed simultaneously (Natureworks 2017). Smiling warmly at the video, Lee seems enchanted by this talent.

“I suspect it was her three pups who didn’t like it so much. You can see one in the video kind of pushing him away. They remind me of my brothers and I at the dinner table, knocking each other around with our lanky elbows.” he says, laughing.

After checking the time, Lee saunters away, leaving Tín and I alone in his garden. At this point, I have accumulated a few dozen mosquito bites, including several on my face. *If only bats liked mosquitos as much as they like mealworms*, I thought *I could easily spend more time here*. For now, it was time to go home.

\*\*\*

In October, the surviving moms and pups will begin to find Austin’s dropping temperatures a bit inhospitable. Along with their kin throughout Texas and beyond, they will travel southward in a mass exodus to their winter roosts in Mexico. Here they will enjoy respite from their celebrity, where they will scatter into private vacation dwellings in unknown locations (National Park Service 2015). Excited by the change in scenery, the free-tails in these smaller colonies will seek a holiday fling, and will have mated by March (Austin Bat Refuge 2018). Pregnant with the next generation of Austin’s beloved bug-munching acrobats, they will depart northward on their journey to give birth in their ceaselessly miraculous fashion: by the thousands, tucked away just blocks from the city’s center. With eager smiles, Dianne and Lee will be there, waiting.

## AUTHOR'S NOTE:

This piece was born from a pre-existing interest I'd had in my roommate's volunteer work at the Austin Bat Refuge. Before even committing to the subject, I asked if I could come along one day to observe their volunteering. I was totally enthralled by the eccentricity of the place, and with the way Dianne and Lee's lives seemed to be totally enveloped by their passion. Though I was also drawn to the bats themselves, I envisioned my story as primarily a human interest piece centered upon Dianne's lived experience as a bat expert and wildlife rehabilitator, thinking that this would be of more interest to readers. Unfortunately, while June proved to be a great time to see cute bat pups, it also proved a hopelessly inconvenient time to arrange another meeting with Dianne, who seemed to be up to her knees in work and rescues. Because I was unable to get further time with her, but pressured by the approaching deadline to move forward with the piece, I realized I'd have to try pursuing things from a different angle. Instead, I thought I could most truthfully capture my own enchantment with the refuge and pay tribute to the boundless appreciation Dianne and Lee seem to have for their bats, in hopes that it could illuminate the value of their work and say something orbiting somewhat near to their own perspectives. To supplement my limited reporting and lack of interviews, I did an extensive amount of research on bats. It took some creativity to carve out of this something that was more 'storytelling' and less 'science report', and I'm not sure how successful I was, but I certainly learned a lot in the process.

## SOURCES

Bat Conservation International. 2018. "Congress Avenue Bridge."

<http://www.batcon.org/index.php/our-work/regions/usa-canada/protect-mega-populations/cab-intro>

Texas Parks and Wildlife Department. 2018. "A Year In the Life of a Mexican Free-tailed Bat."

<https://tpwd.texas.gov/education/resources/keep-texas-wild/hanging-around-with-bats/a-year-in-the-life-of-a-mexican-free-tailed-bat>

Austin Bat Refuge. 2018. "Congress Ave. Bridge."

<https://austinbatrefuge.org/congress-ave-bridge/>

McCracken, Gary F. 1996. "Bats Aloft: A Study of High Altitude Feeding." *BATS Magazine*, Fall 1996.

[http://www.batcon.org/resources/media-education/bats-magazine/bat\\_article/755?tmpl=component](http://www.batcon.org/resources/media-education/bats-magazine/bat_article/755?tmpl=component)

University of Tennessee at Knoxville. 2011. "Economic Importance of Bats in the 'billions a year' range." *ScienceDaily*. April 1, 2011.

<https://www.sciencedaily.com/releases/2011/03/110331142212.htm>

Texas Parks and Wildlife Department. 2018. "Brazilian Free-tailed bat."

<https://tpwd.texas.gov/huntwild/wild/species/brazilfreetailbat/>

Texas Parks and Wildlife Department. 2018. "Frio Bat Cave"

<https://tpwd.texas.gov/huntwild/wild/species/bats/bat-watching-sites/frio-bat-cave.phtml>

Bat Conservation International. 2018. "Bracken Cave: Protecting a Jewel in Texas."

<http://www.batcon.org/our-work/regions/usa-canada/protect-mega-populations/bracken-cave>

Natureworks. 2017. "Eastern Red Bat." <http://www.nhptv.org/natureworks/redbat.htm>

National Park Service. 2015. "Bats' Wintering Sites."

[https://www.nps.gov/cave/learn/nature/wintering\\_bats.htm](https://www.nps.gov/cave/learn/nature/wintering_bats.htm)